



Cavanaugh Macdonald
CONSULTING, LLC

The experience and dedication you deserve



**STATE OF IOWA
PEACE OFFICERS'
RETIREMENT, ACCIDENT AND
DISABILITY SYSTEM**

**Actuarial Valuation Report
as of July 1, 2013**





TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
Certification Letter	
1 Executive Summary	1
2 System Assets	9
Table 1 – Analysis of Net Assets at Market Value	10
Table 2 – Summary of Fund Activity	11
Table 3 – Calculation of Excess (Shortfall) Investment Income for Actuarial Value of Assets	12
Table 4 – Development of Actuarial Value of Assets	13
Table 5 – Historical Comparison	14
3 System Liabilities	15
Table 6 – Present Value of Future Benefits	16
Table 7 – Actuarial Accrued Liability	17
Table 8 – Calculation of Actuarial Gain/(Loss)	18
Table 9 – Actuarial Balance Sheet	19
4 Employer Contributions	20
Table 10 – Normal Cost Rate	21
Table 11 – Unfunded Actuarial Accrued Liability Contribution Rate	22
Table 12 – Actuarial Contribution Rate	23
5 Plan Accounting Information	24
Table 13 – Schedule of Funding Progress	25
Table 14 – Schedule of Employer Contributions	26
Table 15 – Development of the Net Pension Obligation	27

APPENDICES

A	System Membership Information
B	Summary of Plan Provisions
C	Actuarial Method and Assumptions

ADDENDUM



Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

October 16, 2013

Board of Trustees
Iowa Peace Officers' Retirement, Accident
and Disability System
215 East 7th Street
Des Moines, IA 50319

Dear Members of the Board:

At your request, we have performed an actuarial valuation of the Iowa Peace Officers' Retirement, Accident and Disability System as of July 1, 2013. The purpose of this report is to provide: (1) a summary of the funded status of the System as of July 1, 2013, (2) determine the normal contribution rate as defined in Iowa Code Chapter 97A.8, and (3) provide the Annual Required Contribution (ARC) and other accounting information under Governmental Accounting Standards Board Statements No. 25 and 27 (GASB 25 and 27). While not verifying the data at source, the actuary performed tests for consistency and reasonability.

The promised benefits of the System are included in the actuarially calculated contribution rates which are developed using the Entry Age Normal cost method. An asset smoothing method is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded actuarial accrued liability that is being amortized as a level percentage of pay over a closed 30 year period beginning July 1, 2008. The assumptions recommended by the actuary and adopted by the Board are, in the aggregate, reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System. They meet the parameters for the disclosures under GASB 25 and 27.

We have prepared the Schedule of Funding Progress and Trend Information for the System, which may be found in Section 5 of the report. All historical information that references a valuation date prior to July 1, 2010 was prepared by the prior actuarial firm.

This is to certify that the independent consulting actuaries are members of the American Academy of Actuaries and have experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

3906 Raynor Pkwy, Suite 106, Bellevue, NE 68123

Phone (402) 905-4461 • Fax (402) 905-4464

www.CavMacConsulting.com

Offices in Englewood, CO • Kennesaw, GA • Bellevue, NE • Hilton Head Island, SC



Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System while computations presented in this report under GASB Statements No. 25 and 27 are for purposes of fulfilling financial accounting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, our understanding of the plan provisions described in Appendix B of this report, and of GASB Statements No. 25 and 27. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

We respectfully submit the following report and look forward to discussing it with you.

A handwritten signature in blue ink that reads 'Patrice Beckham'.

Patrice A. Beckham, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

A handwritten signature in blue ink that reads 'Brent A. Banister'.

Brent A. Banister, PhD, FSA, EA, FCA, MAAA
Chief Pension Actuary



SECTION 1 – EXECUTIVE SUMMARY

Purpose of the Report

This report presents the results of the July 1, 2013 actuarial valuation of the Iowa Peace Officers' Retirement, Accident and Disability System (PORS). The primary purposes of performing the valuation are as follows:

- to determine the normal contribution rate payable by the State under Chapter 97A.8(1)(b) of the Code of Iowa (referred to in this report as the “actuarial contribution rate”);
- to satisfy the reporting requirements under Chapter 97A.8 of the Code of Iowa;
- to disclose asset and liability measures indicating the current funded status of the System as of the valuation date;
- to analyze and report on trends in System contributions, assets, and liabilities over the past several years; and
- to provide financial reporting information in accordance with Statements No. 25 and 27 of the Governmental Accounting Standards Board.

The valuation results provide a “snapshot” view of the System's financial condition on July 1, 2013. There was no change in the actuarial methods and assumptions used in the 2012 valuation. The unfunded actuarial accrued liability (UAAL) decreased from \$187 million on July 1, 2012 to \$179 million on July 1, 2013, indicating overall favorable experience for FY 2013. A more detailed discussion of actual experience is included later in this section of the report.

The experience of both the System's assets and liabilities impacts the System's funding and the actuarial contribution rate. Experience which is more favorable than anticipated, based on actuarial assumptions, will generally lower the UAAL and the actuarial contribution rate and experience less favorable than expected will generally increase the UAAL and the actuarial contribution rate. The State's actuarial contribution rate decreased from 42.79% in last year's valuation to 41.98% this year, based on a member contribution rate of 10.85% for FY 2014 (which is 0.50% higher than last year). The State's actuarial contribution rate exceeds the fixed payroll related contribution rate for FY 2014 of 29% by 12.48%. However, if the State's supplemental contribution of \$5 million for FY 2014 is included in the analysis, the contribution shortfall drops to 1.11% of payroll. Several factors impacted the actuarial contribution rate:

- The rate of return on the market value of assets was about 15.5%, higher than the assumed rate of return of 8%. Due to the asset smoothing method, not all of the return above 8% was recognized in this valuation. As a result of net favorable investment experience over the past 4 years, the market value of assets is now greater than the actuarial (smoothed) value of assets. This favorable asset experience decreased the UAAL by \$11 million and the actuarial contribution rate by 1.61% of pay.
- Actual contributions below the full actuarial contribution rate for FY 2013 resulted in an increase in the UAAL of \$7 million and increased the actuarial contribution rate by 1.02% of pay.



SECTION 1 – EXECUTIVE SUMMARY

- There was a liability gain of nearly \$7 million, largely due to actual salary increases that were lower than anticipated by the actuarial assumptions. This decreased the UAAL by \$7 million and decreased the actuarial contribution rate by 0.95% of pay.
- The number of active members declined by 3%. As a result, the covered payroll increased only 0.2% from the July 1, 2012 valuation to the current valuation instead of the 3.75% expected growth based on the actuarial assumptions. As a result, the UAAL payment is higher as a percent of payroll.

The State's contribution rate has been lower than the actuarial contribution rate for more than ten years, which has, in most years, resulted in an increase in the UAAL and the actuarial contribution rate. With the changes passed by the 2010 legislature, the statutory contribution rate for the State increases 2% per year until it reaches a maximum of 37% of pay. In addition, the State is scheduled to make supplemental contributions of \$5 million per year beginning July 1, 2013 (changed from 2012 following the passage of HF 2465 in the 2012 legislative session). This supplemental contribution is an important component of strengthening PORS' long term funding, as it represents an additional funding source of approximately 10% of payroll. Looking ahead, the expectation is that the System will have a funded ratio of 100% in FY 2035 if the supplemental contributions are made as scheduled and 87% if they are not made. These changes in the State's contribution, along with the scheduled increase in the member contribution rate, should significantly improve the System's long term funding. If all assumptions are met in the future, the System should attain a funded ratio of 100% within the next 30 years.

Assets

As of July 1, 2013, the System had total funds, measured on a market value basis, of \$329,920,144. This was an increase of \$37,096,848 from last year's market value of \$292,823,296. The market value of assets is not used directly in the calculation of the actuarial contribution rate. The System uses an asset valuation method to smooth the effects of market fluctuations. The actuarial value of assets spreads the difference between the actual return and the expected return (based on the actuarial assumption of 8%) evenly over four years. See Tables 3 and 4 for a detailed development of the actuarial value of assets. The components of the change in the asset values are shown in the following table:

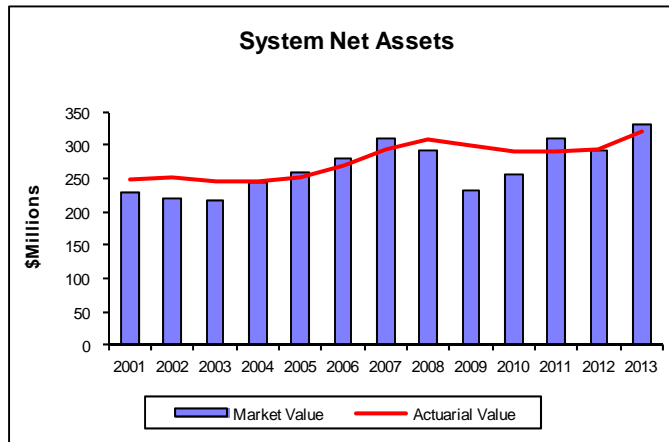
	Market Value	Actuarial Value
Net Assets, July 1, 2012	\$292,823,296	\$292,909,884
• Employer and Member Contributions	16,289,757	16,289,757
• Benefit Payments	(24,076,895)	(24,076,895)
• Administrative Expenses	(174,723)	(174,723)
• Investment Income	45,058,709	34,493,612
Net Assets, July 1, 2013	\$329,920,144	\$319,441,635



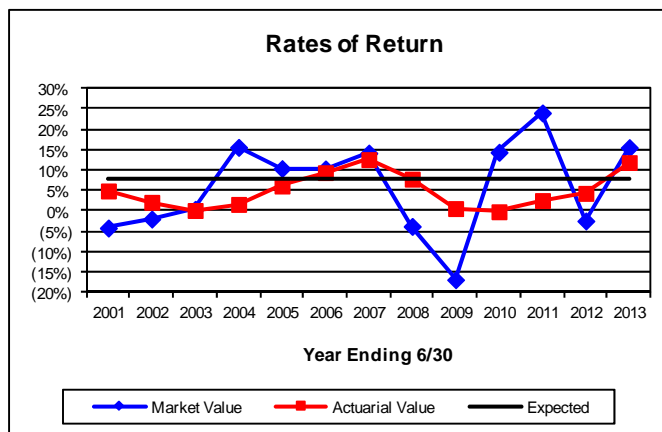
SECTION 1 – EXECUTIVE SUMMARY

The dollar weighted rate of return measured on the market value of assets, net of expenses, was approximately 15.5%. Measured on the actuarial value of assets the rate of return was 11.9%, resulting in an actuarial gain of \$11 million.

The market value of assets is currently about \$10.5 million, or 3.3%, greater than the actuarial value of assets. Absent investment returns less than 8%, this deferred asset gain will be recognized over the next three years, resulting in some decrease in the actuarial contribution rate.



During this period, the actuarial value of assets has been both above and below the market value of assets, which is expected when using an asset smoothing method.



Rates of return on the market value of assets have been extremely volatile, while the return on the actuarial value of assets has been more stable. This illustrates the advantage of using an asset smoothing method.

System Liabilities

The actuarial accrued liability is that portion of the present value of future benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and asset values at the same date is referred to as the unfunded actuarial accrued liability (UAAL). The unfunded actuarial accrued liability will be reduced if the employer's contributions exceed the employer's normal cost for the year, after allowing for interest earned on the previous balance of the unfunded actuarial accrued liability. Benefit improvements, experience gains and losses, and changes in actuarial assumptions and methods will also impact the total actuarial accrued liability (AAL) and the unfunded portion thereof.



SECTION 1 – EXECUTIVE SUMMARY

The unfunded actuarial accrued liability as of July 1, 2013 is as follows:

Actuarial Accrued Liability	\$498,468,989
Actuarial Value of Assets	319,441,635
Unfunded Actuarial Accrued Liability	<u>\$179,027,354</u>

See Table 7 for the detailed development of the Actuarial Accrued Liability and Table 12 for the calculation of the Unfunded Actuarial Accrued Liability.

Other factors influencing the UAAL from year to year include actual experience versus that expected based on the actuarial assumptions (for both assets and the actuarial liability), changes in actuarial assumptions, procedures or methods and any changes in benefit provisions. The actual experience measured in this valuation is that which occurred during the prior plan year (FY 2013). There was an \$11 million experience gain on the actuarial value of assets and a \$7 million net experience gain on the actuarial accrued liability, primarily due to salary increases and post-retirement escalator increases that were less than expected. The total result of all experience was a decrease of \$18 million in the UAAL.

Between July 1, 2012 and July 1, 2013 the change in the unfunded actuarial accrued liability for the System was as follows (in millions):

	<u>\$ millions</u>
Unfunded Actuarial Accrued Liability, July 1, 2012	\$187.2
• effect of contributions less than actuarial rate	7.2
• expected increase due to amortization method	2.7
• investment experience	(11.4)
• liability experience*	(6.7)
• other experience	0.0
Unfunded Actuarial Accrued Liability, July 1, 2013	\$179.0

* Liability gain is about 1.3% of total actuarial accrued liability.

An evaluation of the unfunded actuarial accrued liability on a pure dollar basis may not provide a complete analysis since only the difference between the assets and liabilities (which are both very large numbers) is reflected. Another way to evaluate the unfunded actuarial accrued liability and the progress made in its funding is to track the funded status, the ratio of the actuarial value of assets to the actuarial accrued liability. The funded status information, on both an actuarial and a market value basis, is shown on the following table (in millions).



SECTION 1 – EXECUTIVE SUMMARY

	7/1/2009	7/1/2010	7/1/2011	7/1/2012	7/1/2013
<i>Using Actuarial Value of Assets:</i>					
Funded Ratio	69.4%	67.0%	62.6%	61.0%	64.1%
Unfunded Actuarial Accrued Liability (UAAL)	\$133	\$143	\$173	\$187	\$179
<i>Using Market Value of Assets:</i>					
Funded Ratio	53.9%	59.3%	66.9%	61.0%	66.2%
Unfunded Actuarial Accrued Liability (UAAL)	\$200	\$127	\$153	\$187	\$169

Contribution Rates

Under the Entry Age Normal cost method, the actuarial contribution rate consists of:

- a “normal cost” for the portion of projected liabilities allocated by the actuarial cost method to service of members during the current year; and
- an “unfunded actuarial accrued liability contribution” for the excess of the portion of projected liabilities allocated to service to date over the actuarial value of assets.

The Board has elected to amortize the unfunded actuarial accrued liability, as a level percent of payroll over a closed 30-year period, beginning July 1, 2008. Twenty-five (25) years remain as of July 1, 2013.

The total contribution rate for the Plan Year beginning July 1, 2013 is 52.33% of covered payroll. Based on the member contribution rate of 10.85% for FY 2014, the State’s portion of the actuarial contribution rate is 41.98%. The sources of change are shown in the following table:

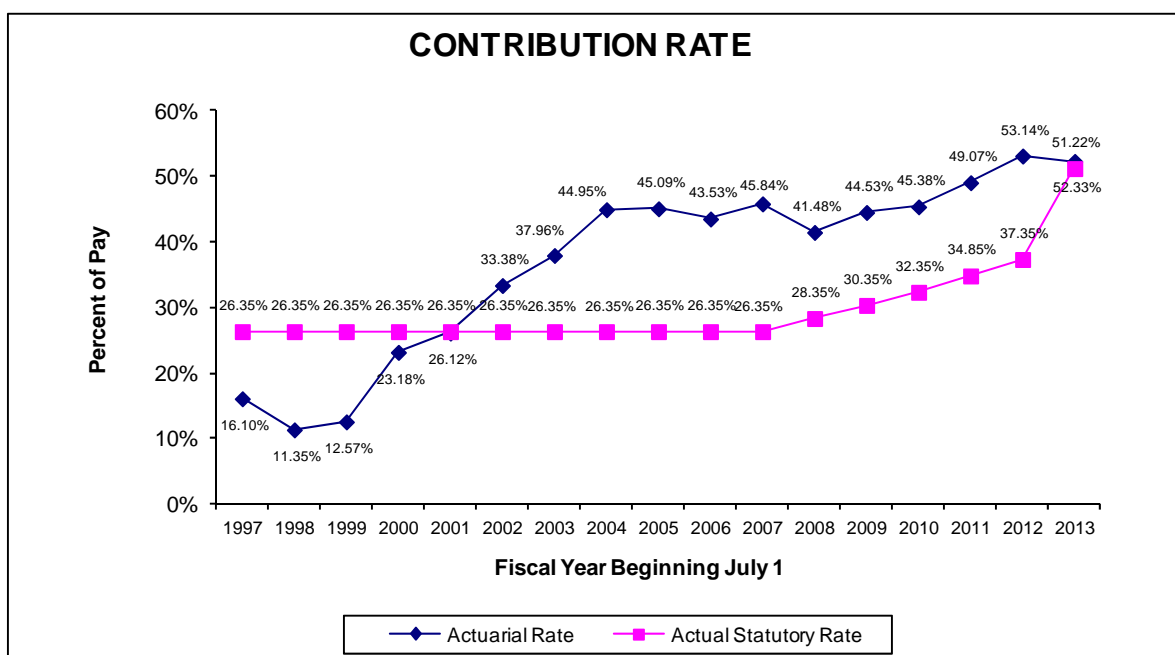
	Plan Year Beginning	
	<u>July 1, 2013</u>	<u>July 1, 2012</u>
Prior year total contribution rate	53.14%	48.54%
• change due to asset (gains)/losses	(1.61%)	1.42%
• change due to liability experience	(0.95%)	(0.13%)
• change due to other actuarial experience	0.90%	0.73%
• change due to new assumptions	0.00%	1.77%
• change due to actual contribution rate less than actuarial rate	1.02%	0.87%
• change in normal cost rate	(0.17%)	(0.06%)
Current year total actuarial contribution rate	52.33%	53.14%
Members' contribution rate	<u>(10.85%)</u>	<u>(10.35%)</u>
State's actuarial contribution rate	41.48%	42.79%



SECTION 1 – EXECUTIVE SUMMARY

Contributions to the System are made by both the members and the State. Historically, members have contributed 9.35% of pay, but the member contribution rate increased to 9.85% for FY 2012, 10.35% for FY 2013, 10.85% in FY 2014 and will increase 0.5% for FY 2015, reaching an ultimate member contribution rate of 11.35%. The State's contribution rate was 17% of pay for many years, but began increasing 2% per year commencing July 1, 2008. In 2010, the Legislature passed a bill that continues the 2% annual increase with an ultimate contribution rate of 37% in FY 2018. It also provides for a supplemental State appropriation of \$5 million per year beginning July 1, 2013 (originally July 1, 2012 but extended by the 2012 legislature) and ending June 30 of the fiscal year during which the System's funded ratio is at least 85%. Current projections show that the supplemental contributions will be needed for eleven years if all actuarial assumptions are met in the future. The State's statutory fixed contribution rate for FY 2014 is 29%. The change in the State's contribution, including the supplemental contributions, along with the increase in the member contribution rate are expected to address the long term funding concerns if all actuarial assumptions are met in the future.

The following graph shows the total actuarial contribution rate compared to the actual contribution rate in each year.



Over the last decade, actual contributions to the System have been significantly less than the actuarial contribution rate. This, coupled with investment returns below the actuarial assumed rate (8%) during the same period, resulted in a significant decline in the System's funded status. While the State's contribution is expected to be less than the actuarial contribution rate for FY 2014, the additional increases in the member and State contribution rates are expected to eliminate the contribution shortfall as long as the \$5 million supplemental contribution is made each year by the State. Over time the increase in the member and State contribution rates, along with the \$5 million supplemental contribution annually, is expected to significantly improve the System's funding.



SECTION 1 – EXECUTIVE SUMMARY

Summary

Although the System's funded ratio remains low (64%), the outlook for the long term health and sustainability of the System is positive. Legislation passed in 2010 was a key factor in improving the long term funding of the System:

- Legislation passed in the 2010 Session clarified the administration of the flat dollar escalator. The new procedure resulted in smaller escalation amounts being paid in the future. As a result, there was a decrease in the actuarial accrued liability and normal cost rate of the System in the 2010 valuation.
- The 2010 legislation strengthened the funding of the System by increasing member contribution rates from 9.35% to 11.35% over a four year period beginning July 1, 2011 and continuing to increase contributions from the State at 2% per year, to an ultimate rate of 37% (27% prior to the legislation). In addition, the State is scheduled to make a supplemental contribution of \$5 million to the System beginning July 1, 2013 (originally July 1, 2012 but delayed by the 2012 legislature) and ending with the fiscal year in which the System reaches a funded ratio of 85%.

It takes many years for the impact of additional contributions to materially improve the System's funded ratios. However, these changes result in a much healthier outlook for the System and are expected to move the System toward fully funded status over the next thirty years, if all actuarial assumptions are met.

The State's actuarial contribution rate for FY 2013 was 42.79%, but the statutory contribution rate was only 27% of covered payroll. This difference between the actual and actuarial contribution rate increased the UAAL by about \$7 million. The \$5 million supplemental contribution by the State for FY 2014 is expected to nearly eliminate the increase in the UAAL that would occur next year due to the contribution shortfall for FY 2014 of 12.48% of pay

The long-term financial health of this, and all retirement systems, is heavily dependent on two key items: (1) investment returns and (2) contributions to the System. Investment experience for the past three years has been above the expected return of 8%. In addition, changes made by the 2010 Iowa Legislature to significantly increase the total contributions to the System in the future have improved the long term funding outlook of the System. While the impact of the increased contribution rates on the System's long term funding will be significant, the improvement in the funded ratio and UAAL resulting from these changes will not be apparent in the funding results for many years.

A summary of key data elements and valuation results as of July 1, 2013 and July 1, 2012 are presented on the following page. More detail on each of these elements can be found in the following Sections of this report.



SECTION 1 – EXECUTIVE SUMMARY

SUMMARY OF PRINCIPAL RESULTS IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

	July 1, 2013 Valuation	July 1, 2012 Valuation	% Change
PARTICIPANT DATA			
Number of			
Active Members	599	618	(3.1)
Retirees/Beneficiaries/Disabled Members	555	549	1.1
Inactive Vested Members	<u>46</u>	<u>41</u>	12.2
Total Members	<u>1,200</u>	<u>1,208</u>	(0.7)
Projected Annual Salaries of Active Members	\$ 43,984,577	\$ 43,902,429	0.2
Average Annual Salary	\$ 73,430	\$ 71,040	3.4
Average Annual Benefit for Retired Members and Beneficiaries	\$ 44,865	\$ 43,402	3.4
ASSETS AND LIABILITIES			
Total Actuarial Accrued Liability	\$498,468,989	\$480,157,072	3.8
Actuarial Value of Assets	<u>319,441,635</u>	<u>292,909,884</u>	9.1
Unfunded Actuarial Accrued Liability	179,027,354	187,247,188	(4.4)
Funded Ratio (Actuarial Value of Assets)	64.1%	61.0%	5.1
Market Value of Assets	329,920,144	292,823,296	12.7
Funded Ratio (Market Value of Assets)	66.2%	61.0%	8.5
CONTRIBUTION RATES			
Normal Cost Rate	26.05%	26.22%	(0.6)
Amortization of Unfunded Actuarial Accrued Liability (Level Percent of Payroll)	<u>26.28%</u>	<u>26.92%</u>	(2.4)
Actuarial Required Contribution Rate	52.33%	53.14%	(1.5)
Member Contribution Rate	<u>(10.85%)</u>	<u>(10.35%)</u>	4.8
Employer Actuarial Required Contribution Rate	41.48%	42.79%	(3.1)
Statutory State Fixed Contribution Rate	(29.00%)	(27.00%)	7.4
State Supplemental Contribution*	<u>(11.37%)</u>	<u>0.00%</u>	0.0
Contribution Shortfall	1.11%	15.79%	(93.0)

* The supplemental contribution is \$5 million annually until the System is at least 85% funded.



SECTION 2 – SYSTEM ASSETS

In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is July 1, 2013. On that date, the assets available for the payment of benefits are appraised. The assets are compared with the liabilities of the System, which are generally in excess of assets. The actuarial process leads to a method of determining the contributions needed by members and the employer in the future to balance the System assets and liabilities.

Market Value of Assets

The current market value represents the “snapshot” or “cash-out” value of System assets as of the valuation date. In addition, market values of assets provide a basis for measuring investment performance from time to time. At July 1, 2013 the market value of assets for the Retirement System was \$329,920,144. Table 1 is a comparison, at market values, of System assets as of July 1, 2012 and July 1, 2013, in total and by investment category. Table 2 summarizes the change in the market value of assets from July 1, 2012 to July 1, 2013.

Actuarial Value of Assets

Neither the market value of assets, representing a “cash-out” value of System assets, nor the book value of assets, representing the cost of investments, may be the best measure of the System’s ongoing ability to meet its obligations. To arrive at a suitable value for the actuarial valuation, a technique for determining the actuarial value of assets is used which dampens swings in the market value while still indirectly recognizing market values. The actuarial value of assets is equal to the market value of assets less a four year phase-in of the excess (shortfall) between expected investment return (based on the actuarial assumption) and actual investment return.

Tables 3 and 4 show the development of the actuarial value of assets (AVA) as of the valuation date.



SECTION 2 – SYSTEM ASSETS

TABLE 1

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

ANALYSIS OF NET ASSETS AT MARKET VALUE

	July 1, 2013		July 1, 2012	
	Amount	% of Total	Amount	% of Total
Pooled Cash	\$ 6,026,845	1.8 %	\$ 6,605,694	2.1 %
Receivables	7,758,718	2.3	4,584,059	1.5
Common Stocks	218,081,045	64.1	119,568,869	38.7
Securities on Loan	8,869,184	2.6	14,777,080	4.8
Bonds	83,709,024	24.6	149,243,735	48.3
Real Estate	15,824,888	4.6	14,021,828	4.6
Subtotal	\$340,269,704	100.0 %	\$308,801,265	100.0 %
Payables	<u>(10,349,560)</u>		<u>(15,977,969)</u>	
NET ASSETS	\$329,920,144		\$292,823,296	



SECTION 2 – SYSTEM ASSETS

TABLE 2

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

SUMMARY OF FUND ACTIVITY

(Market Value)

1. NET ASSETS ON JULY 1, 2012	\$ 292,823,296
2. CONTRIBUTIONS	
a. Member Contributions	4,512,096
b. Employer Contributions	11,777,661
c. Lump Sum Contributions	0
	<hr/>
d. Total Contributions	\$ 16,289,757
3. BENEFIT PAYMENTS	
a. Pension and annuity payments	24,076,895
b. Refunds	0
	<hr/>
c. Total Benefit Payments	\$ 24,076,895
4. ADMINISTRATIVE EXPENSE	174,723
5. INVESTMENT INCOME	45,058,709
6. NET ASSETS ON JULY 1, 2013	\$ 329,920,144
(1) + (2d) - (3c) - (4) + (5)	



SECTION 2 – SYSTEM ASSETS

TABLE 3

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM
CALCULATION OF EXCESS (SHORTFALL) INVESTMENT INCOME FOR
ACTUARIAL VALUE OF ASSETS

	Plan Year Ending			
	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>
1. Market value of assets, beginning of year	\$292,823,296	\$308,607,733	\$256,873,773	\$233,187,738
2. Contributions during year				
a. Member	4,512,096	4,329,921	3,844,044	3,778,295
b. Employer	11,777,661	10,741,204	9,554,014	8,498,523
c. Lump sum payments	0	0	0	0
d. Total	16,289,757	15,071,125	13,398,058	12,276,818
3. Benefits paid during year	24,076,895	23,337,833	22,253,857	21,412,629
4. Refunds paid during year	0	0	0	0
5. Expected net investment income at 8%				
a. Market value of assets, beginning of year	23,425,864	24,688,619	20,549,902	18,655,019
b. Contributions	639,055	591,248	525,612	481,625
c. Benefits	(944,548)	(915,554)	(873,030)	(840,028)
d. Refunds	0	0	0	0
e. Total	23,120,371	24,364,313	20,202,485	18,296,616
6. Expected Value of Assets (1) + (2d) - (3) - (4) + (5e)	308,156,529	324,705,338	268,220,459	242,348,543
7. Market value of assets, end of year	329,920,144	292,823,296	308,607,733	256,873,773
8. Excess (shortfall) of investment income for Year (7) - (6)	21,763,615	(31,882,042)	40,387,274	14,525,230



SECTION 2 – SYSTEM ASSETS

TABLE 4

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM
DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

Item	Plan Year Ending June 30	
	<u>2013</u>	<u>2012</u>
1. Excess (Shortfall) of investment income for current and previous 2 years		
a. Current year	\$ 21,763,615	(\$31,882,042)
b. One year ago	(31,882,042)	40,387,274
c. Two years ago	40,387,274	14,525,230
2. Deferral of excess (shortfall) of investment income		
a. Current year (75%)	16,322,711	(23,911,532)
b. One year ago (50%)	(15,941,021)	20,193,637
c. Two years ago (25%)	10,096,819	3,631,307
d. Total	<u>10,478,509</u>	<u>(86,588)</u>
3. Market value of plan net assets, end of year	329,920,144	292,823,296
4. Actuarial value of plan assets, end of year (3) - (2d)	\$319,441,635	\$292,909,884
5. Actuarial value divided by market value	96.8%	100.0%



SECTION 2– SYSTEM ASSETS

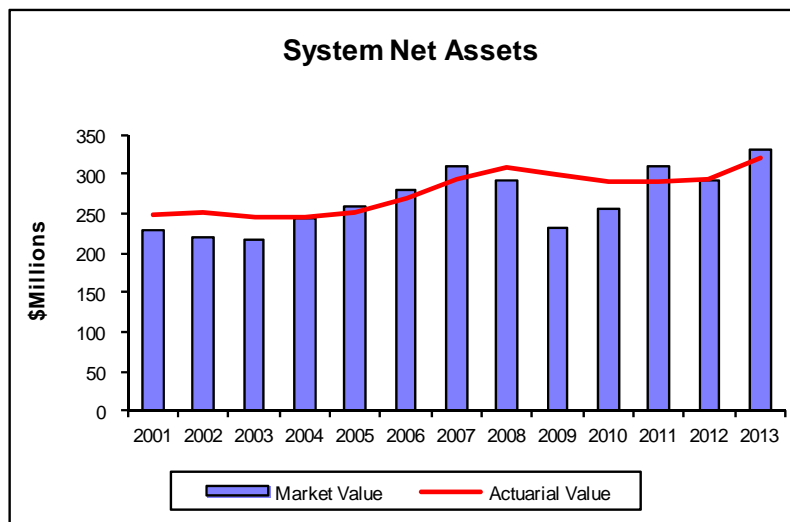
TABLE 5

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM HISTORICAL COMPARISON

<u>Value As of</u>	<u>Market Value of Net Assets</u>	<u>Estimated Rate of Return (MVA)*</u>	<u>Actuarial Value of Assets**</u>	<u>Estimated Rate of Return (AVA)</u>
1-Jul-99	\$ 219,462,509	6.2%		
1-Jul-00	239,568,583	10.2%		
1-Jul-01	227,402,298	(4.2%)	\$249,226,895	4.9%
1-Jul-02	219,373,555	(2.0%)	250,914,077	2.1%
1-Jul-03	215,454,491	0.4%	246,443,660	0.1%
1-Jul-04	242,279,998	15.6%	244,161,533	1.6%
1-Jul-05	260,104,910	10.4%	251,828,813	6.1%
1-Jul-06	278,940,737	10.3%	267,813,445	9.4%
1-Jul-07	310,489,530	14.2%	293,374,805	12.6%
1-Jul-08	290,306,257	(3.8%)	307,291,608	7.8%
1-Jul-09	233,187,738	(16.9%)	300,262,337	0.6%
1-Jul-10	256,873,773	14.4%	290,558,596	(0.2%)
1-Jul-11	308,607,733	24.1%	309,330,330	2.5%
1-Jul-12	292,823,296	(2.5%)	292,909,884	4.3%
1-Jul-13	329,920,144	15.5%	319,441,635	11.9%

* Net of Expenses.

** A smoothing method for actuarial value of assets was implemented July 1, 2001





SECTION 3– SYSTEM LIABILITIES

In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of assets of the System as of the valuation date, July 1, 2013.

In this section, the discussion will focus on the commitments of the System, which are referred to as its liabilities.

Table 6 contains an analysis of the actuarial present value of all future benefits (PVFB) for contributing members, inactive members, retirees and their beneficiaries. The analysis is provided for each group.

The liabilities summarized in Table 6 include the actuarial present value of all future benefits expected to be paid with respect to each member. For an active member, this value includes measures of both benefits already earned and future benefits expected to be earned. For all members, active and retired, the value extends over benefits earnable and payable for the rest of their lives and for the lives of the surviving beneficiaries.

The actuarial assumptions used to determine liabilities are based on the results of an Experience Study prepared in 2012. This set of assumptions, as adopted by the Board, is shown in Appendix C and was first used in the 2012 valuation. The Board's election to change the actuarial cost method from Aggregate to Entry Age Normal was first reflected in the July 1, 2008 valuation.

Actuarial Liabilities

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. An actuarial cost method is a mathematical technique that allocates the present value of future benefits into annual costs. In order to do this allocation, it is necessary for the funding method to “breakdown” the present value of future benefits into two components:

- (1) that which is attributable to the past and
- (2) that which is attributable to the future.

Actuarial terminology calls the part attributable to the past the “past service liability” or the “actuarial accrued liability”. The portion allocated to the future is known as the present value of future normal costs, with the specific piece of it allocated to the current year being called the “normal cost”. Table 7 contains the calculation of actuarial accrued liability.



SECTION 3– SYSTEM LIABILITIES

TABLE 6

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

**PRESENT VALUE OF FUTURE BENEFITS
AS OF JULY 1, 2013**

1. Active employees	
a. Retirement Benefit	\$303,264,762
b. Withdrawal Benefit	1,730,800
c. Pre-Retirement Death Benefit	6,872,416
d. Disability Benefit	25,217,432
e. Total	<u>\$337,085,410</u>
2. Inactive Vested Members	3,848,567
3. Disability Retirees	46,886,217
4. Retirees and Beneficiaries	<u>233,606,427</u>
5. Total Present Value of Future Benefits	<u>\$621,426,621</u>
(1e) + (2) + (3) + (4)	



SECTION 3– SYSTEM LIABILITIES

TABLE 7

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

**ACTUARIAL ACCRUED LIABILITY
AS OF JULY 1, 2013**

1.	Present Value of Future Benefits		
a.	Retirement Benefit	\$303,264,762	
b.	Withdrawal Benefit	1,730,800	
c.	Pre-Retirement Death Benefit	6,872,416	
d.	Disability Benefit	<u>25,217,432</u>	
e.	Total		\$337,085,410
2.	Present Value of Future Normal Costs		
a.	Retirement Benefit	\$ 94,940,716	
b.	Withdrawal Benefit	2,170,909	
c.	Pre-Retirement Death Benefit	6,670,278	
d.	Disability Benefit	<u>19,175,729</u>	
e.	Total		122,957,632
3.	Present Value of Future Benefits for Inactive Members		<u>284,341,211</u>
4.	Total Actuarial Accrued Liability		\$498,468,989
	(1e) - (2e) + (3)		



SECTION 3— SYSTEM LIABILITIES

TABLE 8

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM CALCULATION OF ACTUARIAL GAIN/(LOSS)

The actuarial gain/(loss) is comprised of both the liability gain/(loss) and the actuarial asset gain/(loss). Each of these represents the difference between the expected and actual values as of July 1, 2013.

1.	Expected actuarial accrued liability	
a.	Actuarial accrued liability at July 1, 2012	\$ 480,157,072
b.	Normal cost for year ending June 30, 2013	11,194,042
c.	Benefit payments for fiscal year ending June 30, 2013	(24,076,895)
d.	Interest on (a), (b), and (c)	37,907,165
e.	Expected actuarial accrued liability at July 1, 2013 (a) + (b) + (c) + (d)	\$ 505,181,384
2.	Actuarial accrued liability at July 1, 2013	\$ 498,468,989
3.	Actuarial accrued liability gain/(loss) (1e) - (2)	\$ 6,712,395
4.	Expected actuarial value of assets	
a.	Actuarial value of assets at July 1, 2012	\$ 292,909,884
b.	Contributions for fiscal year ending June 30, 2013	16,289,757
c.	Benefit payments and administrative expenses for fiscal year ending June 30, 2013	(24,251,618)
d.	Interest on (a), (b), and (c)	23,120,443
e.	Expected actuarial value of assets at July 1, 2013 (a) + (b) + (c) + (d)	\$ 308,068,466
5.	Actuarial value of assets at July 1, 2013	\$ 319,441,635
6.	Actuarial value of assets gain/(loss) (5) - (4e)	\$ 11,373,169
7.	Net actuarial gain/(loss) (3) + (6)	\$ 18,085,564



SECTION 3– SYSTEM LIABILITIES

TABLE 9
IOWA PEACE OFFICERS’ RETIREMENT, ACCIDENT AND DISABILITY SYSTEM
ACTUARIAL BALANCE SHEET
as of
July 1, 2013

ASSETS

Actuarial value of assets	\$319,441,635
Present value of future normal costs	122,957,632
Unfunded actuarial accrued liability	<u>179,027,354</u>
<u>Total Net Assets</u>	\$621,426,621

LIABILITIES

Present Value of Future Benefits

Retired Members and Beneficiaries		\$280,492,644
Active Members		
Retirement	\$303,264,762	
Death	1,730,800	
Disability	6,872,416	
Termination	<u>25,217,432</u>	
Total		337,085,410
Inactive Vested Members		<u>3,848,567</u>
<u>Total Liabilities</u>		\$621,426,621



SECTION 4– EMPLOYER CONTRIBUTIONS

The previous two sections were devoted to a discussion of the assets and liabilities of the System. A comparison of Tables 4 and 6 indicates that current assets fall short of meeting the present value of future benefits (total liability). This is expected in all but a fully closed down fund, where no further contributions are anticipated.

In an active system, there will almost always be a difference between the actuarial value of assets and total liabilities. This deficiency has to be made up by future contributions and investment returns. An actuarial valuation sets out a schedule of future contributions that will deal with this deficiency in an orderly fashion.

The method used to determine the incidence of the contributions in various years is called the actuarial cost method. Under an actuarial cost method, the contributions required to meet the difference between current assets and current liabilities are allocated each year between two elements: (1) the normal cost and (2) the payment on the unfunded actuarial accrued liability.

The term “fully funded” is often applied to a system in which contributions at the normal cost rate are sufficient to pay for the benefits of existing employees as well as for those of new employees. More often than not, systems are not fully funded, either because of past benefit improvements that have not been completely funded and/or because of actuarial deficiencies that have occurred because experience has not been as favorable as anticipated. Under these circumstances, an unfunded actuarial accrued liability (UAAL) exists.

Description of Rate Components

Effective with the July 1, 2008 valuation, the actuarial cost method used by the System changed from Aggregate to the traditional Entry Age Normal (EAN) – level percent of pay cost method. Under the EAN cost method, the actuarial present value of each member’s projected benefit is allocated on a level basis over the member’s compensation between the entry age of the member and the assumed exit ages. The portion of the actuarial present value allocated to the valuation year is called the normal cost. The actuarial present value of benefits allocated to prior years of service is called the actuarial accrued liability. The unfunded actuarial accrued liability represents the difference between the actuarial accrued liability and the actuarial value of assets as of the valuation date. The unfunded actuarial accrued liability is calculated each year and reflects experience gains/losses.

The UAAL is amortized as a level percent of payroll over a closed 30-year period commencing July 1, 2008. Given a stable active workforce, the level percent of payroll amortization method is expected to produce a payment stream that is constant as a percent of covered payroll.

Contribution Rate Summary

The normal cost rate is developed in Table 11. Table 12 develops the contribution rate for amortization of the unfunded actuarial accrued liability. Table 13 develops the total actuarial contribution rate.



SECTION 4— EMPLOYER CONTRIBUTIONS

TABLE 10

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

**NORMAL COST RATE
AS OF JULY 1, 2013**

1. Normal Cost		<u>% of Pay</u>
a. Retirement Benefit	\$ 8,576,370	20.10%
b. Withdrawal Benefit	198,385	0.47%
c. Pre-Retirement Death Benefit	620,673	1.45%
d. Disability Benefit	1,719,620	4.03%
e. Total	<u>\$11,115,048</u>	<u>26.05%</u>
2. Expected Payroll in FY14 for Current Actives	\$42,660,715	
3. Normal Cost Rate [(1e)/(2)]	26.05%	



SECTION 4— EMPLOYER CONTRIBUTIONS

TABLE 11

**IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM
UNFUNDED ACTUARIAL ACCRUED LIABILITY CONTRIBUTION RATE
AS OF JULY 1, 2013**

1. Actuarial Present Value of Future Benefits	\$621,426,621
2. Actuarial Present Value of Future Normal Costs	<u>122,957,632</u>
3. Actuarial Accrued Liability (1) -(2)	\$498,468,989
4. Actuarial Value of Assets	<u>319,441,635</u>
5. Unfunded Actuarial Accrued Liability (UAAL) (3) - (4)	\$179,027,354
6. Amortization of UAAL over a closed 30-year period starting July 1, 2008 (assumed mid-year)*	\$ 11,557,661
7. Total Estimated Payroll for Year Ending June 30, 2014	\$ 43,984,577
8. Amortization as a Percent of Payroll	26.28%

*The UAAL is amortized as a level percent of payroll, assuming payroll increases of 3.75% per year.



SECTION 4— EMPLOYER CONTRIBUTIONS

TABLE 12

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM
ACTUARIAL CONTRIBUTION RATE
FOR FISCAL YEAR ENDING JUNE 30, 2014

1. Total Normal Cost Rate	26.05%
2. Amortization of UAAL*	<u>26.28%</u>
3. Total Actuarial Contribution Rate (1) + (2)	52.33%
4. Member Contribution Rate	<u>(10.85%)</u>
5. State Actuarial Contribution Rate (3) - (4)	41.48%

*Amortization of UAAL is as a level percent of payroll assuming a 3.75% annual increase in payroll.



SECTION 5– PLAN ACCOUNTING INFORMATION

The Governmental Accounting Standards Board (GASB) Statements No. 25, Financial Reporting for Defined Benefit Pension Plans, and Statement No. 27, Accounting for Pensions by State and Local Governmental Employers, apply to the preparation of financial reports of pension plans for State and local governments.

GASB Statement No. 25 establishes a financial reporting framework for defined benefit plans. In addition to two required statements regarding plan assets, the statement requires two schedules and accompanying notes disclosing information relative to the funded status of the plan and historical contribution patterns.

- The Schedule of Funding Progress reflects the use of the Entry Age Normal cost method. The System uses an asset smoothing method.
- The Schedule of Employer Contributions provides historical information about the annual required contribution (ARC) and the percentage of the ARC that was actually contributed. For the Peace Officers' Retirement, Accident and Disability System, the ARC is equal to State's Normal Contribution Rate multiplied by the expected covered payroll for the fiscal year.

GASB Statement No. 27 establishes standards for the measurement, recognition, and display of pension expense and related liabilities. Annual pension cost is measured and disclosed on the accrual basis of accounting. In general, the annual pension cost is equal to the ARC with adjustments for past under-contributions or over-contributions. These adjustments are based on the net pension obligation (NPO) that represents the cumulative difference between the annual pension cost and the actual contributions to the plan. The first adjustment is equal to interest on the NPO which is added to the ARC. The second adjustment is an amortization of the NPO which is deducted from the ARC.

In 2012, GASB issued the final version of GASB Statements No. 67 and 68 which will supersede GASB Statements No. 25 and 27. GASB 67, which applies to the System, will first be effective for fiscal year end 2014. GASB 68, which applies to the employer (State of Iowa), will be effective for fiscal year end 2015.



SECTION 5– PLAN ACCOUNTING INFORMATION

TABLE 13

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

SCHEDULE OF FUNDING PROGRESS

In accordance with Statement No. 25 of the Governmental Accounting Standards Board

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (P/R) (c)	UAAL as a Percentage of Covered P/R [(b-a)/(c)]
7/1/2008	\$307,193,608	\$417,176,049	\$ 109,982,441	73.64%	\$ 40,829,801	269.37%
7/1/2009	300,262,337	432,894,495	132,632,158	69.36%	41,862,395	316.83%
7/1/2010	290,558,596	433,402,131	142,843,535	67.04%	41,954,599	340.47%
7/1/2011	288,851,354	461,594,916	172,743,562	62.58%	43,493,715	397.17%
7/1/2012	292,909,884	480,157,072	187,247,188	61.00%	43,902,429	426.51%
7/1/2013	319,441,635	498,468,989	179,027,354	64.08%	43,984,577	407.02%

Note: Results for valuations prior to 2010 were prepared by the prior actuary.



SECTION 5— PLAN ACCOUNTING INFORMATION

TABLE 14

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

SCHEDULE OF EMPLOYER CONTRIBUTIONS

In accordance with Statement No. 25 of the Governmental Accounting Standards Board

Fiscal Year Ending	Annual Required Contribution (a)	Total Employer Contribution (b)	Percentage of ARC Contribution (b/a)
6/30/2011	\$15,116,242	\$9,554,014	63.20%
6/30/2012	16,826,611	10,741,204	63.83%
6/30/2013	18,785,849	11,777,661	62.69%

Notes to the Required Schedules:

1. The assets are shown at actuarial (smoothed) value.
2. Economic assumptions are as follows:
 - Investment return rate of 8.00%
 - Salary increase rate varies from 7.25% to 4.25%, based on years of service.
 - Post-retirement benefit increases are based on expected payroll growth and provisions of the law.
3. Amortization of the unfunded actuarial liability is over a 30-year closed period starting July 1, 2008



SECTION 5— PLAN ACCOUNTING INFORMATION

TABLE 15

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

DEVELOPMENT OF THE NET PENSION OBLIGATION

**In Accordance with Statement No. 27 of the
Governmental Accounting Standards Board**

Fiscal Year:	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
Assumptions and Method:					
Interest Rate	8.00%	8.00%	8.00%	8.00%	8.00%
Wage Inflation	4.00%	4.00%	4.00%	4.00%	4.00%
Amortization Period (years)	17	17	17	16	30
Cost Method	Aggregate	Aggregate	Aggregate	Aggregate	EAN
Annual Pension Cost:					
Annual Required Contribution (ARC)	\$11,577,021	\$11,914,592	\$12,383,974	\$13,599,115	\$13,118,615
Interest on NPO	(899,356)	(407,525)	80,714	570,297	1,119,738
Adjustment to ARC	913,080	413,744	(81,946)	(604,863)	(794,969)
Annual Pension Cost	11,590,745	11,920,811	12,382,742	13,564,549	13,443,384
Contributions for the Year:	5,442,868	5,817,819	6,262,951	6,696,538	7,898,356
Net Pension Obligation (NPO):					
NPO at beginning of year	(11,241,945)	(5,094,068)	1,008,924	7,128,715	13,996,726
Annual Pension Cost for year	11,590,745	11,920,811	12,382,742	13,564,549	13,443,384
Contribution for year	(5,442,868)	(5,817,819)	(6,262,951)	(6,696,538)	(7,898,356)
NPO at end of year	(5,094,068)	1,008,924	7,128,715	13,996,726	19,541,754
Fiscal Year:	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
Assumptions and Method:					
Interest Rate	8.00%	8.00%	8.00%	8.00%	8.00%
Wage Inflation	4.00%	4.00%	4.00%	3.75%	3.75%
Amortization Period (years)	29	28	27	26	25
Cost Method	EAN	EAN	EAN	EAN	EAN
Annual Pension Cost:					
Annual Required Contribution (ARC)	\$14,727,191	\$15,116,242	\$16,826,611	\$18,785,849	\$18,244,803
Interest on NPO	1,563,340	2,096,254	2,585,260	3,123,201	3,736,573
Adjustment to ARC	(1,130,590)	(1,545,902)	(1,946,409)	(2,464,239)	(3,015,324)
Annual Pension Cost	15,159,941	15,666,594	17,465,462	19,444,811	18,966,052
Contributions for the Year:	8,498,523	9,554,014	10,741,204	11,777,661	*
Net Pension Obligation (NPO):					
NPO at beginning of year	19,541,754	26,203,172	32,315,752	39,040,010	46,707,160
Annual Pension Cost for year	15,159,941	15,666,594	17,465,462	19,444,811	18,966,052
Contribution for year	(8,498,523)	(9,554,014)	(10,741,204)	(11,777,661)	*
NPO at end of year	26,203,172	32,315,752	39,040,010	46,707,160	*

* Will not be determined until the end of Fiscal Year 2014

Note: Results for valuations prior to 2010 were prepared by the prior actuary



APPENDIX A

SYSTEM MEMBERSHIP

INFORMATION



APPENDIX A – SYSTEM MEMBERSHIP INFORMATION

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

Reconciliation of Member Status From July 1, 2012 to July 1, 2013

	Active Members	Members & Beneficiaries Receiving Benefits	Former Members with Deferred Benefits	Children Receiving Benefits	Total
Members as of July 1, 2012	618	541	41	8	1,208
Began Receiving Benefits	(14)	20	(1)	0	5
Terminated Without Further Benefit Eligibility	(4)	0	(1)	0	(5)
Terminated With Benefit Eligibility	(7)	0	7	0	0
Returned to Active Status	0	0	0	0	0
Deceased	0	(11)	0	0	(11)
Benefits Ended	0	0	0	(3)	(3)
Newly Hired	6	0	0	0	6
Adjustments	0	1	0	(1)	0
Members as of July 1, 2013	599	551	46	4	1,200



APPENDIX A – SYSTEM MEMBERSHIP INFORMATION

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM AGE AND SERVICE DISTRIBUTION AS OF JULY 1, 2013 FOR ACTIVE PARTICIPANTS Males and Females

		Years of Service																			
		0 to 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 & over		Total	
Age	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	No.	Avg. Salary	
Under 25	5	43,124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	43,124	
25-29	14	45,804	38	53,564	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52	51,475	
30-34	3	49,530	70	58,476	7	68,060	0	0	0	0	0	0	0	0	0	0	0	0	80	58,979	
35-39	1	50,196	31	59,134	33	71,394	39	76,507	0	0	0	0	0	0	0	0	0	0	104	69,453	
40-44	0	0	13	61,249	17	72,107	89	80,836	24	82,998	0	0	0	0	0	0	0	0	143	78,380	
45-49	0	0	2	54,308	0	0	32	82,417	65	80,418	9	87,486	0	0	0	0	0	0	108	81,116	
50-54	0	0	0	0	0	0	6	79,453	17	83,808	42	86,527	16	87,422	0	0	0	0	81	85,609	
55-59	0	0	0	0	0	0	1	76,763	5	80,948	7	86,185	10	91,005	0	0	0	0	23	86,733	
60-64	0	0	0	0	0	0	0	0	0	0	1	84,260	1	84,260	0	0	1	84,260	3	84,260	
65-69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
70 & over	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals	23	45,898	154	57,576	57	71,197	167	80,054	111	81,519	59	86,594	27	88,632	0	0	1	84,260	599	73,430	
Average Age:																			41.2		
Average Years of Service:																			15.9		



APPENDIX A – SYSTEM MEMBERSHIP INFORMATION

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

ANALYSIS OF INACTIVE MEMBERS

As of July 1, 2013

Males and Females

Number of Participants

<u>Age</u>	<u>Service Retirement</u>	<u>Accidental Disability</u>	<u>Ordinary Disability</u>	<u>Vested Retirement</u>	<u>Child Beneficiary</u>	<u>Contingent Beneficiary</u>	<u>Inactive Vested</u>	<u>Total</u>
Under 40	0	1	0	0	4	0	14	19
40 to 44	0	3	0	0	0	0	17	20
45 to 49	0	6	0	0	0	1	8	15
50 to 54	0	4	1	0	0	3	7	15
55 to 59	42	7	1	4	0	6	0	60
60 to 64	66	10	3	2	0	8	0	89
65 to 69	61	9	5	4	0	15	0	94
70 to 74	60	23	0	7	0	19	0	109
75 to 79	47	9	1	3	0	19	0	79
80 to 84	24	5	2	1	0	22	0	54
85 to 89	24	2	0	0	0	13	0	39
90 to 94	3	0	0	0	0	1	0	4
95 to 99	1	0	0	0	0	3	0	4
100 & over	0	0	0	0	0	0	0	0
Totals	328	79	13	21	4	110	46	601



APPENDIX A – SYSTEM MEMBERSHIP INFORMATION

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

ANALYSIS OF INACTIVE MEMBERS

As of July 1, 2013

Males and Females

Average Annual Benefits of Participants

<u>Age</u>	<u>Service Retirement</u>	<u>Accidental Disability</u>	<u>Ordinary Disability</u>	<u>Vested Retirement</u>	<u>Child Beneficiary</u>	<u>Contingent Beneficiary</u>	<u>Inactive Vested</u>
Under 40	0	37,725	0	0	4,575	0	7,917
40 to 44	0	38,714	0	0	0	0	14,280
45 to 49	0	43,062	0	0	0	35,336	17,544
50 to 54	0	50,955	36,722	0	0	23,122	27,501
55 to 59	70,532	43,162	34,939	31,690	0	30,222	0
60 to 64	66,259	49,546	47,274	12,292	0	31,551	0
65 to 69	58,400	45,715	45,888	11,490	0	24,092	0
70 to 74	51,327	44,834	0	13,414	0	21,764	0
75 to 79	44,312	41,214	34,596	6,667	0	22,856	0
80 to 84	37,983	40,422	31,803	5,616	0	21,242	0
85 to 89	38,700	38,116	0	0	0	22,077	0
90 to 94	32,833	0	0	0	0	20,707	0
95 to 99	33,759	0	0	0	0	23,863	0
100 & over	0	0	0	0	0	0	0
Totals	54,978	44,374	41,625	15,087	4,575	23,584	14,923



APPENDIX B – SUMMARY OF PLAN PROVISIONS

APPENDIX B

SUMMARY OF PLAN PROVISIONS



APPENDIX B – SUMMARY OF PLAN PROVISIONS

Chapter 97A of the Iowa code sets out the benefit provisions of the Iowa Peace Officers' Retirement, Accident and Disability System, which are briefly summarized as follows:

Retirement Benefit

Eligibility

Age 55 with 22 years of service.

Monthly Annuity

The sum of (1) and (2):

- (1)
 - a. For retirement prior to July 1, 1990, 50% of average final compensation at retirement. Average final compensation equals average of highest three years of compensation.
 - b. For retirement after June 30, 1990 and before July 1, 1992, 54% of average final compensation at retirement.
 - c. For retirement after June 30, 1992 and before July 1, 1993, 56% of average final compensation at retirement.
 - d. For retirement after June 30, 1993 and before July 1, 1994, 58% of average final compensation at retirement.
 - e. For retirement after June 30, 1994, and before July 1, 2000, 60% of average final compensation at retirement.
 - f. For retirement after July 1, 2000, 60.5% of average final compensation at retirement.
- (2) For members who do not withdraw member contributions:
 - a. For retirement after June 30, 1990 and before July 1, 1991, 0.3% of average final compensation for each year of service over 22 years (up to 8 years). Service after age 55 is excluded.
 - b. For retirement after June 30, 1991 and before October 16, 1992, 0.6% of average final compensation for each year of service over 22 years (up to 8 years). Service after age 55 is excluded.



APPENDIX B – SUMMARY OF PLAN PROVISIONS

c. For retirement after October 15, 1992 and before July 1, 1996, 0.6% of average final compensation for each year of service over 22 years (up to 8 years).

d. For retirement after June 30, 1996, 1.5% of average final compensation for each year of service over 22 years (up to 8 years).

e. For retirement after June 30, 1998, 1.5% of average final compensation for each year of service over 22 years (up to 10 years).

f. For retirement after June 30, 2000, 2.75% of average final compensation for each year of service over 22 years (up to 10 years).

Early Retirement Benefit

Eligibility

Effective July 1, 1996, age 50 (but not age 55) with 22 years of service.

Monthly Annuity

The benefit provided as a retirement benefit actuarially reduced for commencement prior to age 55.

Deferred Vested Benefit

Eligibility

Four years of service.

Monthly Annuity

At age 55. The benefit provided as a retirement benefit at termination times a service ratio. The service ratio equals service at termination divided by 22 (not greater than 1.0).

Ordinary Disability Benefit

Eligibility

None.

Benefit

(1) If service at disability is greater than or equal to 5 years, 50% of average final compensation at disability.



APPENDIX B – SUMMARY OF PLAN PROVISIONS

- (2) If service at disability is greater than or equal to 22 years, the greater of (1) or the benefit amount calculated under a service retirement. Effective July 1, 1998, the service requirement does not apply.
- (3) If service at disability is less than 5 years, 25% of average final compensation at disability.

Accidental Disability Benefit

Eligibility

None.

Benefit

- (1) For retirement prior to July 1, 1990, 66-2/3% of average final compensation at disability.
- (2) For retirement after June 30, 1990, 60% of average final compensation at disability. If the service amount at disability is greater than or equal to 22 years, the greater of 60% of average final compensation at disability or the benefit amount calculated under a service retirement.

Ordinary Death Benefit

Eligibility

For member in service: None.
For member not in service: Four years of service.

Benefit

- (1) A lump sum equal to 50% of compensation during the last year of employment, or
- (2) A pension based on 40% of average final compensation but not less than 25% of compensation paid to an active member having the rank of senior patrol officer of the state patrol. For members not in service, benefit is multiplied by the ratio of service at termination to 22 years (not greater than 1.0).
- (3) Additional benefit for members in service of 6% of compensation payable to an active member having the rank of senior patrol officer of the state patrol for each child.



APPENDIX B – SUMMARY OF PLAN PROVISIONS

Payment Date

- (1) For members in service: Immediately upon death of member.
- (2) For member not in service: Payable when member would have been age 55. If there are children of the member, payable commencing at the member's death until children reach age 18 or 22. Pension resumes when member would have been age 55.

Accidental Death Benefit

Eligibility

In actual performance of duty.

Benefit

- (1) 50% of average final compensation payable to surviving spouse, children or dependent parents.
- (2) If there is not surviving spouse, children or dependent parents, or if accidental death occurs while not in the actual performance of duty, an Ordinary Death Benefit is payable.
- (3) Additional benefit for members in service of 6% of compensation payable to an active member having the rank of senior patrol officer of the state patrol, for each child.
- (4) If the death meets specified criteria, a lump sum of \$100,000 payable to surviving spouse, children, dependent parents, or estate.

Death After Retirement

Benefit

- (1) 50% of retirement allowance of retired member but not less than 25% of compensation paid to an active member having the rank of senior patrol officer of the state patrol.
- (2) Additional benefit of 6% of compensation payable to an active member having the rank of senior patrol officer of the state patrol, for each child.



APPENDIX B – SUMMARY OF PLAN PROVISIONS

Adjustments to Pensions

Each July 1 and January 1, if applicable, the following adjustments are made: Monthly earnable compensation payable to an active member, of the same rank and position in the salary scale as was held by the retired or deceased member at the time of the member's retirement or death, for July of the current year less that of the preceding July, times the following percentages:

- (1) 40% for members receiving a service retirement allowance and for beneficiaries receiving an accidental death benefit.
- (2) 40% for members with five or more years of membership who are receiving an ordinary disability benefit.
- (3) 40% for member receiving an accidental disability benefit.
- (4) 24% for members with less than five years of membership who are receiving an ordinary disability benefit and for beneficiaries receiving an ordinary death benefit.
- (5) 50% of the amount which would have been added to the benefit of the retired member, for surviving spouses, but not less than 25% of the monthly earnable compensation paid to an active member having the rank of senior patrol officer.

Additionally, the following amounts will be added to a member or beneficiary monthly pension as follows:

<u>Years Since Retired*</u>	<u>Amount</u>
0-4	\$15
5-9	20
10-14	25
15-19	30
20 or more	35

*Measured in whole years.

There was a change in the way the flat escalator was applied effective July 1, 2010. Prior to 2010, the amount increased for each year after retirement.

Surviving children's pensions are adjusted each July to equal 6% of monthly earnable compensation payable to an active



APPENDIX B – SUMMARY OF PLAN PROVISIONS

member having the rank of senior patrol officer of the state patrol.

Member Contributions

The following percentage of earnable compensation will be paid as member contributions:

<u>Period</u>	<u>Member Contribution Rate</u>
January 1, 1995 - June 30, 1995	8.35%
July 1, 1995 forward	9.35%
July 1, 2011 – June 30, 2012	9.85%
July 1, 2012 – June 30, 2013	10.35%
July 1, 2013 – June 30, 2014	10.85%
July 1, 2014 forward	11.35%

Withdrawal of Member Contributions

Effective July 1, 1990, members who terminate service, other than by death or disability, can elect to withdraw their accumulated contributions with interest in lieu of any benefits to which the member may be entitled from the System.

Transfers With Statewide Fire and Police Retirement System

Beginning July 1, 1996, vested members of an eligible retirement system who terminate employment and, within one year, commences covered employment under another eligible retirement system, may elect to transfer the average accrued benefit or the refund liability earned from the former system to the current system. Once such transfer is completed, service under the former system shall be treated as membership service under the current system.



APPENDIX C

ACTUARIAL METHODS AND ASSUMPTIONS



APPENDIX C – ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Cost Method

Liabilities and contributions shown in this report are computed using the Individual Entry Age method of funding.

Sometimes called "funding method," this is a particular technique used by actuaries for establishing the amount of the annual actuarial cost of pension System benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the System is comprised of (1) the normal cost and (2) an amortization payment on the unfunded actuarial accrued liability.

Under the Entry Age Actuarial Cost Method, the **Normal Cost** is computed as the level percentage of pay which, if paid from the earliest time each member would have been eligible to join the System if it then existed (thus, entry age) until his retirement or termination, would accumulate with interest at the rate assumed in the valuation to a fund sufficient to pay all benefits under the System.

The **Actuarial Accrued Liability** under this method at any point in time is the theoretical amount of the fund that would have accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date). The **Unfunded Actuarial Accrued Liability** is the excess of the actuarial accrued liability over the actuarial value of System assets on the valuation date.

Under this method experience gains or losses, i.e. decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.

Actuarial Assumptions

Interest Rate: 8% per year.

Price Inflation: 3.0% per year.

Payroll Growth: 3.75% per year, including price inflation.

Active Members:

- | | | |
|----|-----------------------|---|
| 1. | Ordinary death rate | RP-2000 Mortality Table for Employees with Generational Projection. |
| 2. | Accidental death rate | 8.5 deaths per 10,000 exposed for one year. |



APPENDIX C – ACTUARIAL ASSUMPTIONS AND METHODS

3. Disability rates

<u>Age</u>	<u>Accidental Disability</u>	<u>Ordinary Disability</u>
22	0.14%	0.09%
27	0.15%	0.10%
32	0.20%	0.13%
37	0.24%	0.16%
42	0.29%	0.19%
47	0.36%	0.24%
52	0.46%	0.31%

4. Withdrawal rate

The following table is used:

<u>Service</u>	<u>Rate</u>
0	5.0%
1-2	3.5%
3	3.0%
4	2.5%
5	2.0%
6	1.5%
7-14	1.0%
15-19	0.5%
20	0.0%

6. Retirement age

<u>30 or More Years of Service</u>	
<u>Age</u>	<u>Probability of Retirement</u>
55-61	60%
62	100%

<u>Less than 30 Years of Service</u>	
<u>Age</u>	<u>Probability of Retirement</u>
55-59	30%
60-61	50%
62	100%

7. Salary scale

<u>Year</u>	<u>Increase</u>
1	7.25%
5	7.25%
15	6.50%
20	5.25%
25+	4.25%

8. Post-retirement adjustments

Same as for retired members.

Retired Members and Other



APPENDIX C – ACTUARIAL ASSUMPTIONS AND METHODS

Beneficiaries:

- | | | |
|----|------------------------------------|--|
| 1. | Mortality rate - Service retirees | Service retirements and beneficiaries: RP-2000 Mortality Table for Healthy Annuitants with Generational Projection Mortality Tables - Male and Female. |
| 2. | Mortality rate - Disabled retirees | Disability retirements: RP-2000 Mortality Table for Healthy Annuitants with Generational Projection with a 5 year age set forward. |
| 3. | Annual readjustment of pensions | Wages for the same rank are assumed to increase 3.75%. |

Dependency Ratios:

- | | | |
|----|---|---|
| 1. | Ordinary death benefit | Alternate benefits payable to widow and minor children in 90% of cases. |
| 2. | Pension to spouse and children of deceased pensioned member | In 90% of cases. |



ADDENDUM

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM CERTIFICATION

We have prepared an actuarial valuation of the Iowa Peace Officers' Retirement, Accident and Disability System as of July 1, 2013, for the fiscal year ending June 30, 2014. The results of the valuation are set forth in this addendum, which reflects the benefit provisions in effect on July 1, 2013.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete, or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

The results in this Addendum have been prepared for the sole purpose of providing the information required under Chapter 97 D.5 of the Iowa code. Calculations are based on the following prescribed methods:

Actuarial cost method: Entry Age Normal
Amortization method: Level percent of payroll
Amortization period: 30 years, open period

All other assumptions, methodologies, and System provisions used are consistent with those used in the regular July 1, 2013 valuation for the Iowa Peace Officers' Retirement, Accident and Disability System.

The results shown in this Addendum may not be consistent with those in the regular July 1, 2013 valuation. The July 1, 2013 valuation results were determined in accordance with generally accepted actuarial principles and practices that are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying opinion and supporting recommendations of the American Academy of Actuaries. The results shown in this Addendum are not necessarily based on the methodologies adopted by the System.

We are available to answer any questions on the material contained in this report, or to provide explanations or further details as may be appropriate.

The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

Patrice Beckham

Patrice A. Beckham, FSA, EA, FCA, MAAA

October 16, 2013

Date

Brent A. Banister

Brent A. Banister, PhD, FSA, EA, FCA, MAAA

October 16, 2013

Date



ADDENDUM

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM SUMMARY OF VALUATION RESULTS UNDER PRESCRIBED METHODOLOGY

This addendum report has been prepared to present the results of a valuation of the Iowa Peace Officers' Retirement, Accident and Disability System as of July 1, 2013, based on the prescribed methodology under current statutes and regulations issued thereunder.

The unfunded actuarial accrued liability has been amortized as a level percent of payroll over 30 years. The payroll growth assumption used was 3.75%.

A summary of principal valuation results from the current and the prior valuation follows.

	Actuarial Valuation as of	
	July 1, 2013	July 1, 2012
Summary of Costs		
Normal cost	26.05%	26.22%
UAAL amortization	23.77%	26.92%
Total	49.82%	53.14%
Less Employee Contribution Rate	(10.85%)	(10.35%)
State Required Contribution	38.97%	42.79%
Funded Status		
Actuarial accrued liability	\$498,468,989	\$480,157,072
Actuarial value of assets	319,441,635	292,909,884
Unfunded actuarial accrued liability	\$179,027,354	\$187,247,188
Funded Ratio	64.08%	61.00%
Asset Values		
Market value of assets (MVA)	\$329,920,144	\$292,823,296
Actuarial value of assets (AVA)	319,441,635	292,909,884
MVA/AVA	103.28%	99.97%